

**DIVISION OF ENVIRONMENTAL HEALTH
SOLID WASTE PROGRAM
610 UNIVERSITY AVENUE
FAIRBANKS, AK 99709-3643**

Telephone: (907) 451-2134

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August 3, 1998

File Number: 107.15.003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED # Z 269 837 474

Mr. Gary B. Willems
Dept. of the Air Force
354 CES/CEVC
2258 Central Ave. Suite 100
Eielson AFB, AK 99702-2299

**Re: Solid Waste Permit #9831-BA010, Land Application of Biosolids,
Renewal of Permit #9731-BA013**

Dear Mr. Willems:

The Department of Environmental Conservation has completed its evaluation of your solid waste permit renewal request for landspreading treated biosolids for revegetation purposes at Eielson AFB. The anaerobically digested and air-dried biosolids will be land applied to portions of Eielson AFB in the general area around the flight line, to aid in the reduction of bird/aircraft hazards. This permit applies to areas totaling approximately 509 acres, located on Eielson AFB, in Sections 2, 3, 11, 14, and 23 of T.3.S., R.3E., and in Section 34 of T.2S., R.3E., Fairbanks Meridian.

The Department is issuing this permit in accordance with AS 46, 18 AAC 15, and 18 AAC 60. Please review the conditions and stipulations in the permit and ensure they are all understood. This permit is effective upon issuance and expires August 1, 2003. If it is necessary to obtain a renewal of this permit, the Department requires that a renewal application be submitted 30 days before the permit expiration date.

Any person who disagrees with this decision may appeal the decision by requesting an adjudicatory hearing, using the procedures contained in 18 AAC 15.200-310. Hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 105, Juneau, Alaska 99801-1795, within 30 days of receipt of this letter. If a hearing is not requested within 30 days, the right to appeal is waived. Please also send a copy of the request to the undersigned.

Sincerely,

Kris McCumby for
Heather T. Stockard
Solid Waste Program Manager

KM/mlg (EH/SW/FBKS - k:\eh\sw\1998\9831-010pmt.doc)

Enclosure: Permit 9831-BA010
cc w/enc: Alan Simmons, Eielson AFB
Heather Stockard, ADEC/Juneau

**ALASKA DEPARTMENT
OF
ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL HEALTH
610 UNIVERSITY AVENUE
FAIRBANKS, ALASKA 99709-3643**

BIOSOLIDS LANDSPREADING PERMIT

Permit: **9831-BA010**

Date: August 3, 1998

This Solid Waste Disposal Permit is issued to the Department of the Air Force, Eielson Air Force Base, 354 CES/CEVC, 2258 Central Ave., Suite 100, Eielson AFB, AK 99702-2299 for the land application of biosolids at Eielson AFB. This permit applies to land totaling approximately 509 acres in size and in the general area of the Eielson AFB flight line. The areas to be revegetated by landspreading biosolids are located on Eielson AFB, in Sections 2, 3, 11, 14, and 23 of T.3S., R.3E., and in Section 34 of T.2S., R.3E., Fairbanks Meridian. This permit is subject to the conditions and stipulations in the following Appendices:

Appendix A	Specific Conditions
Appendix B	General Permit Conditions

This permit is issued under provisions of Alaska Statute 46.03, the Alaska Administrative Code, as amended or revised, and other applicable State laws and regulations.

This permit is effective upon issuance and expires August 1, 2003. It may be terminated or modified in accordance with AS 46.03.120.

Kris McCumby for
Heather T. Stockard
Solid Waste Program Manager

APPENDIX A - SPECIFIC CONDITIONS

I. SITE DEVELOPMENT:

The permit holder shall:

- A. Comply with the plans and landspreading locations submitted in the renewal application dated July 8, 1998, and the revised Quality Assurance/Control Sampling Procedure information submitted on July 30, 1998, as well as the following permit conditions. Additional modifications may be requested, but must be authorized by a permit amendment, before that modification is effective.

The terms Asludge≡ or Abiosolids≡ used in this permit refer only to wastewater treatment plant sludge which has been treated to reduce pathogens and vector attraction, and tested for specific pollutants as described in 40 CFR Part 503.13 and .15, adopted by reference in 18 AAC 60.505. This permit does not address or allow other types of industrial sludges to be landspread.

- B. Ensure that site development will allow for application of biosolids at an appropriate (dry tons per acre) agronomic application rate for nitrogen, based on the dry weight content of nitrogen present in the biosolids and on any residual nitrogen present in the soil for areas that have been previously landspread. All applications shall be done in a manner that will facilitate site revegetation and closure.
- C. Ensure that a minimum 50-foot horizontal distance is maintained between the area being landspread and the property boundary.
- D. Ensure that surface water run off from outside the facility does not flow onto the facility and over, into or through uncovered biosolids by incorporating the biosolids into the surface soils and by constructing and maintaining diversion structures such as ditches or berms, as needed. Maintain drainage patterns in the application area through the installation of drainage structures of adequate number and size to prevent flooding or excessive drainage of adjacent land and to prevent any water quality violations.

II. BIOSOLIDS HAULING AND APPLICATION:

The permit holder shall:

- A. Ensure only tested biosolids from the Eielson AFB Wastewater Treatment Plant are landspread at this facility. Bulk biosolids application shall meet the requirements of Cumulative Pollutant Loading Rates for priority metals pollutants listed in Table 2 of 40 CFR Part 503.13. Biosolids being landspread must also meet the Class A or B pathogen reduction requirements of 40 CFR Part 503.32(a) and the Vector Attraction Reduction requirements of Option 10 of 40 CFR Part 503.15 (incorporation into the soil) unless otherwise approved in writing by ADEC. These sections are adopted by reference in 18 AAC 60.505. Should the source or quality of biosolids change significantly, the Department will be notified immediately.

II. BIOSOLIDS HAULING AND APPLICATION: (Cont.)

B. Ensure biosolids transport and soil incorporation requirements listed below are followed:

1. Biosolids in dry cake form are transported to the application sites in vehicles or containers fitted with positive sealing devices. At a minimum, tailgates shall be fitted with a rubber seal and additional tailgate locks. The load must be covered with a securely fastened tarp. Tanker trucks may be used to transport liquid biosolids.
2. Any dry cake biosolids must be spread on the surface soil and disked in, plowed, or otherwise incorporated into the soil within 24 hours of placement at the site.
3. All biosolids hauling and incorporation will be accomplished on the same day. Stockpiling of biosolids at the application sites is not permitted, unless they have been blended to form slurry and are stored in leak-proof, sealed tanks.
4. Any accumulated biosolids are cleaned from transport trucks or vehicles immediately after loading or depositing of loads, so as to prevent spillage and drag-out of biosolids on roadways.
5. Use flag pins or stakes, clearly marking areas in the fields where biosolids have been land applied, noting dates of application.
6. Biosolids shall not be applied to the land surface during a precipitation event in which the rainfall exceeds 1/4 inch per hour, or within 24 hours following a precipitation event in which more than 1/2 inch of rainfall is measured.
7. If biosolids are to be injected at the land application sites, the depth of injection shall be at least four inches below the surface, but no greater than ten inches below the surface. The depth of injection may vary, depending on the type of vegetation to be grown.

C. Maintain a minimum four-foot separation distance between the biosolids application layer and the seasonal high groundwater level.

D. Ensure biosolids are landspread only when soils are thawed and workable, unless otherwise approved in writing by the Solid Waste Program, Fairbanks Office. Placement of biosolids on snow-covered ground is prohibited.

E. Prohibit landspreading of biosolids on slopes of greater than 7% for tilled ground and 12% for vegetated ground, unless controls are present to prevent runoff and erosion. An exception is allowed for the revegetation of the earthen dike in area S-2.

F. Ensure dry biosolids are handled appropriately to prevent air quality violations for fugitive dust emissions under 18 AAC 50 State Air Quality Regulations.

II. BIOSOLIDS HAULING AND APPLICATION: (Cont.)

- G. Collect any windblown and littered refuse that may accumulate at the application sites and ensure that it is disposed of in a landfill permitted for the disposal of that waste.
- H. Ensure that public access to the biosolids application area is controlled during application times. Construct and maintain any onsite roads, gates, or temporary barricades, as necessary, to assure adequate traffic control. Adequate traffic control means that the site supervisor will maintain positive control of all persons who are within the application area boundaries and that biosolids will be applied only in approved locations.
- I. Post informational signs in areas adjacent to public contact sites (e.g., athletic fields in area S-1) where any biosolids have been landspread. The signs should inform residents that land application of biosolids has occurred in the area, the date of biosolids application, and contact telephone numbers for questions regarding the application. Signs shall remain in place for at least one year after the application of biosolids to an area.
- J. Maintain a minimum horizontal separation distance of 35 feet between application areas and any surface water located in the proposed application sites. An exception is allowed for the revegetation of the earthen dike in area S-2, where the biosolids may be applied to revegetate only the outside slopes of the dike.
- K. Seed the surface area to be revegetated with an appropriate mixture of grasses and plants for northern climates to allow for successful revegetation of the site.
- L. If biosolids meeting only the Class B pathogen reduction requirements (as defined in 40 CFR Part 503.32) are to be land applied, then the following site restrictions must be followed:
 - 1. Ensure public access to land for high potential for public exposure (e.g., parks, playgrounds, and athletic fields) is restricted for one year after application.
 - 2. Ensure public access to land with a low potential for public exposure (e.g., undeveloped fields, access roads, flight line areas) is restricted for 30 days after biosolids application.
 - 3. Erect and maintain readily visible signs every 200 feet along normal access routes to the application sites, for the periods of site access restriction required in 1 and 2 above. Signs should contain the following information, printed in one-inch high or larger lettering:

Keep Out
Domestic Sludge (Biosolids) Use Area
Contact Person Name
Telephone Number

II. BIOSOLIDS HAULING AND APPLICATION: (Cont.)

- M. Ensure that in the event of any biosolids spill incident in excess of one cubic yard, it is reported to ADEC at (907-451-2360). Clean up of any amount of spilled material shall be initiated within one hour after the spill occurs. The spilled material shall be cleaned up to the satisfaction of ADEC and the area will be disinfected, as needed. Monitoring to assess potential environmental quality damages to the spill area will be done, if deemed necessary by the Department.

III. PROHIBITIONS AND SPECIAL RESTRICTIONS

The permit holder shall:

- A. Prohibit land application of biosolids to soils which are frozen or covered with snow.
- B. Prohibit the application of biosolids in excess of the agronomic requirements for nitrogen for plant species being grown.
- C. Prohibit disposal of commercial or household wastes, vehicles, and construction/demolition debris or any hazardous wastes at this site.
- D. Prohibit application of biosolids within the area designated as "Flightline Pond" until after such a time as the pond has been filled in and there is no standing surface water at the site. The area around Flightline Pond may be landspread if the buffer distance requirements of Appendix A, Section II (J) of this permit are met.

IV. MONITORING AND REPORTING

The permit holder shall:

- A. Visually monitor the application sites each month when the ground is not covered with snow, for signs of potential damage from erosion or operations, and retain the inspection results in the facility's operating record for Department review during inspections. Visual inspection records shall be retained for at least five years.
- B. Ensure that biosolids are tested no more than 30 days prior to their application for pathogen levels to ensure that in cases where Class A pathogen reduction levels have been met and regrowth of pathogens will not occur before land application.
- C. Conduct analytical testing of the biosolids prior to landspreading for the priority metals pollutants in Table 1 of 40 CFR Part 503.13, adopted by reference in 18 AAC 60.050. Ensure that metals concentrations (in dry weight) do not exceed Ceiling Concentration limits for land application or Cumulative Pollutant Loading Rates when applied.
- D. Test biosolids for Benzene, Toluene, Ethylbenzene and Xylene (BTEX) concentrations prior to land application. Ensure that the concentrations for Petroleum Hydrocarbon Fractions do not exceed 0.1 mg/kg for Benzene and 10.0 mg/kg for BTEX, per dry weight volume for any biosolids to be landspread.

IV. MONITORING AND REPORTING: (Cont.)

- E. Maintain an inventory of the biosolids application rates, areas where they have been applied, and results of quality assurance/quality control analyses for pollutant concentrations, pathogen reduction and vector attraction reduction methods used during treatment of biosolids prior to their application. Retain the results of testing and analyses in the facility's operating record for Department review during inspections. Records shall be retained for at least five years, with the exception of specific cumulative pollutant loading information which must be kept indefinitely, in accordance with 40 CFR Part 503.17(a)(5).
- F. Submit an annual biosolids management report by November 1 of each year to the Department. Information in the report should include: a map showing the areas that have been landspread; information as to the application rates and total number of dry tons of biosolids that have been landspread during the application season; and, photographs of the areas that have been landspread.

V. CLOSURE AND RESTORATION

The permit holder shall:

- A. Notify the Department at least **five** working days before the project is complete and the final truckload of biosolids will be placed at the site.
- B. Ensure that the areas which have had land application of biosolids have been graded to promote and maintain surface water runoff without erosion and seeded with an appropriate plant seed mixture. Complete additional surface restoration work and reseeded, if the Department determines that significant erosion or lack of sufficient revegetation has occurred within five years after site closure.

APPENDIX B - GENERAL PERMIT CONDITIONS

I. ACCESS AND INSPECTION

The permittee shall allow the Commissioner or her/his representative access to the permitted facilities at reasonable times to conduct scheduled or unscheduled inspections or tests to determine compliance with this permit, State laws, and regulations.

II. INFORMATION ACCESS

Except for information relating to confidential processes or methods of manufacture, all records and reports submitted in accordance with the terms of this permit shall be available for public inspection at the State of Alaska Department of Environmental Conservation, Fairbanks Office, 610 University Avenue, Fairbanks, Alaska 99709-3643.

III. CIVIL AND CRIMINAL LIABILITY

Nothing in this permit shall relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond his control, including, but not limited to, accidents, equipment breakdowns, or labor disputes.

IV. AVAILABILITY

The permittee shall post or maintain a copy of this permit available to the public at the disposal facility.

V. ADVERSE IMPACT

The permittee shall take all necessary means to minimize any adverse impacts to the receiving waters or lands resulting from noncompliance with any limitation specified in this permit, including any additional monitoring needed to determine the nature and impact of the noncomplying activity. The permittee shall cleanup and restore all areas adversely impacted by the noncompliance.

VI. CULTURAL OR PALEONTOLOGICAL RESOURCES

Should cultural or paleontological resources be discovered as a result of this activity, work which would disturb such resources is to be stopped, and the State Historic Preservation Office, Division of Parks and Outdoor Recreation, Department of Natural Resources, is to be notified immediately (907-269-8721).

VII. APPLICATIONS FOR RENEWAL

In accordance with 18 AAC 15.100(d), applications for renewal or amendment of this permit must be made no later than 30 days before the expiration date of the permit or the planned effective date of the amendment.

VIII. OTHER LEGAL OBLIGATIONS

The requirements, duties, and obligations set forth in this permit are in addition to any requirements, duties, or obligations contained in any permit that the Alaska Department of Environmental Conservation or the U.S. Environmental Protection Agency has issued or may issue to the permittee. This permit does not relieve the permittee from the duty to obtain any and all necessary permits and to comply with the requirements contained in any such permit or with applicable state and federal laws and regulations. All activities conducted by the permittee pursuant to the terms of this permit and all plans implemented by the permittee pursuant to the terms of this permit shall comply with all applicable state and federal laws and regulations.

IX. POLLUTION PREVENTION

In order to prevent and minimize present and future pollution, when making management decisions that affect waste generation, the permittee shall consider the following order of priority options: waste source reduction; recycling of waste; waste treatment; and waste disposal.